

# Rodent Ventilator

Cat. No. 7025

## General

The 7025 Rodent Ventilator is a volume-controlled mechanical ventilator (according to Starling's ventilator method), designed for use with rats, guinea pigs, mice and small birds.

The 7025 drive consists of a variable speed geared motor linked by a novel variable stroke mechanism to easily interchangeable cylinder/piston assemblies.

In particular, the **7025 can be equipped with 5, 10 or 30ml** cylinder/piston assembly.

Its precisely regulated geared-motor speed provides the most accurate and reliable stroke rate control of any respirator available.

The operation of the 7025 may be "paused" by an external TTL logic signal.

*The picture features a Rodent Ventilator 7025, together with the 6025 for Cat/Rabbit*



**Best available  
Starling  
Pumps**

**THE CHOICE OF  
THE CRITICS!**

*"We have four of your respirators in our extended lab and they are wonderful - as is your service"*

*Dr. Nicholas Price, Monash University*

## Main Features

- Interchangeable cylinder/piston assemblies (5, 10, 30ml)
- Quiet operation, both acoustically and electrically (negligible R.F. broadcasting)
- Reliable mechanics and impeccable finishing: lifelong lasting
- Synchronised START/STOP function available as optional

**Ugo Basile: more than 10,000 citations**

## Instrument description

The **unique linkage mechanism** insures that:

- 1) The piston almost touches the cylinder end with each stroke, regardless of the pre-set volume, thus insuring all air taken into the pump is expelled with each stroke.
- 2) The volume, clearly indicated on a **stationary dial**, is adjustable by means of a knob while the pump is either running or at standstill.
- 3) The reciprocating motion is generated, adjusted and transmitted to the piston by rods and articulated joints only.

The **lack of sliding friction** leads to:

- a) practically no wear
- b) no backlash and hence silent operation and exact stroke reproducibility.

## Hook-up to animal

Four ports (*Intake, To Animal, From Animal and Exhaust*) allow flexibility in air channelling.

The input may be room air or any non-explosive gas mixture. The exhaust air may be partially or totally recycled or collected for analysis.

## Ventilator Controls

The speed control knob adjusts the geared motor to the desired speed, which is indicated on the 3-digit LED display labelled STROKES P.M.

The operation of Ugo Basile Ventilators may be "paused" by an external TTL logic signal.

## Start / Stop Model

For more demanding electrophysiological-pharmacological investigations, in particular when the operation of the Ventilator is software controlled, a **synchronised command** is available to START-STOP the Ventilator at completed forced inspiration.

Ask for special models 7125.

## Specifications

|                     |   |
|---------------------|---|
| Rate                | 10 to 180 strokes for minute                                  |
| Rate Read-out       | digital display   |
| Stroke Volume       | 0.5 to 5; 1 to 10 or 3 to 30 ml, depending on cylinder/piston |
| Stroke Vol. Scale   | 1-10 ml   |
| Stroke Vol. Reprod. | ±2%   |
| Universal input     | 85-264 VAC, 50-60Hz, 40 VA max.                               |

## Physical

|                 |              |
|-----------------|--------------|
| Dimensions      | 27x26x19cm   |
| Net weight      | 9.5Kg        |
| Shipping Weight | 16Kg approx. |
| Packing         | 67x42x53cm   |

## Ordering Information

|                 |  |
|-----------------|--|
| <b>7025</b>     | <b>RODENT VENTILATOR</b> , complete with following standard accessories: |
| <b>7026</b>     | 10ml Cylinder/piston assembly, complete                                  |
| <b>7032</b>     | Perspex Lid  |
| <b>7033</b>     | Lithium-Grease Tube  |
| <b>7044</b>     | Y-Canula   |
| <b>7025-302</b> | Instruction Manual (on CD)   |
| <b>E-WP 008</b> | Mains Cord   |

## Other available models and accessories

|                 |   |
|-----------------|---|
| <b>7025-5</b>   | <b>RODENT VENTILATOR</b> , as above, 5ml  |
| <b>7025-30</b>  | <b>RODENT VENTILATOR</b> , as above, 30ml |
| <b>7128</b>     | 5ml Cylinder/piston assembly, complete    |
| <b>7027</b>     | 30ml Cylinder/piston assembly, complete   |
| <b>7025-150</b> | Anesthesia Kit                            |

## Models with synchronised START/STOP feature

|                |                                 |
|----------------|---------------------------------|
| <b>7125</b>    | <b>Rodent Ventilator</b> , 10ml |
| <b>7125-5</b>  | <b>Rodent Ventilator</b> , 5ml  |
| <b>7125-30</b> | <b>Rodent Ventilator</b> , 30ml |

See also our Anesthesia Systems, series 21100, the ideal match to our Ventilators!



## Bibliography

- A. Andersen et alia: "sGC-cGMP-PKG pathway stimulation protects the healthy but not the failing right ventricle of rats against ischemia and reperfusion injury" *Intl. J. Cardiology* 233: 674-680, 2016
- R.H. Hassing Frandsen et alia: "No apparent role for T-type Ca2+ channels in renal autoregulation" *Eur. J. Physiology* 468 (4): 541-550, 2016
- J. Johnsen et alia: "The remote ischemic preconditioning algorithm: effect of number of cycles, cycle duration and effector organ mass on efficacy of protection" *Basic Res. in Cardiology*, March 2016
- S. Jeuthe et alia: "Closed-chest small animal model to study myocardial infarction in an MRI environment in real time" *Intl. J. Cardiovascular Imaging* 31 (1): 115-121, 2015
- J.K. Marshall et alia: "Intra-Operative Tissue Oxygen Tension Is Increased by Local Insufflation of Humidified-Warm CO2 during Open Abdominal Surgery in a Rat Model" *PlosOne* April 2015